

1. To estimate the one-sided limit of the function below as x approaches 2 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{2}{x} - 1}{x - 2}$$

- A. {2.0000, 2.1000, 2.0100, 2.0010}
 - B. {2.0000, 1.9000, 1.9900, 1.9990}
 - C. {1.9000, 1.9900, 2.0100, 2.1000}
 - D. {2.1000, 2.0100, 2.0010, 2.0001}
 - E. {1.9000, 1.9900, 1.9990, 1.9999}
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2. Based on the information below, which of the following statements is always true?

$f(x)$ approaches ∞ as x approaches 3.

- A. $f(x)$ is close to or exactly ∞ when x is large enough.
 - B. $f(x)$ is close to or exactly 3 when x is large enough.
 - C. $f(x)$ is undefined when x is close to or exactly 3.
 - D. x is undefined when $f(x)$ is close to or exactly ∞ .
 - E. None of the above are always true.
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3. To estimate the one-sided limit of the function below as x approaches 4 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{4}{x} - 1}{x - 4}$$

- A. {3.9000, 3.9900, 3.9990, 3.9999}
- B. {3.9000, 3.9900, 4.0100, 4.1000}
- C. {4.0000, 3.9000, 3.9900, 3.9990}
- D. {4.1000, 4.0100, 4.0010, 4.0001}

E. $\{4.0000, 4.1000, 4.0100, 4.0010\}$

4. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow 7^+} \frac{-9}{(x+7)^3} + 4$$

A. $f(7)$

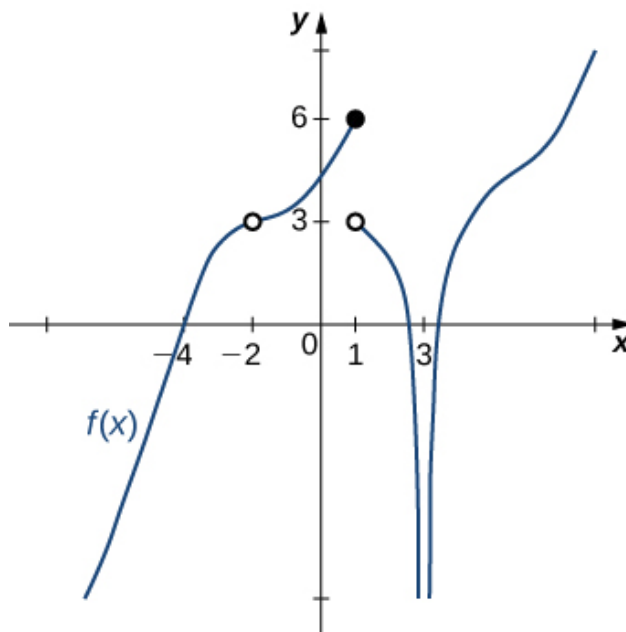
B. $-\infty$

C. ∞

D. The limit does not exist

E. None of the above

5. For the graph below, find the value(s) a that makes the statement true:
 $\lim_{x \rightarrow a} f(x)$ does not exist.



A. 3

B. 1

C. -2

D. Multiple a make the statement true.

E. No a make the statement true.

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6. Based on the information below, which of the following statements is always true?

$f(x)$ approaches 13.648 as x approaches 1.

A. $f(13) = 1$

B. $f(13)$ is close to or exactly 1

C. $f(1) = 13$

D. $f(1)$ is close to or exactly 13

E. None of the above are always true.

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7. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow 7^+} \frac{-1}{(x+7)^3} + 7$$

A. $-\infty$

B. ∞

C. $f(7)$

D. The limit does not exist

E. None of the above

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8. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 7} \frac{\sqrt{7x-24} - 5}{6x-42}$$

A. 0.100

B. 0.017

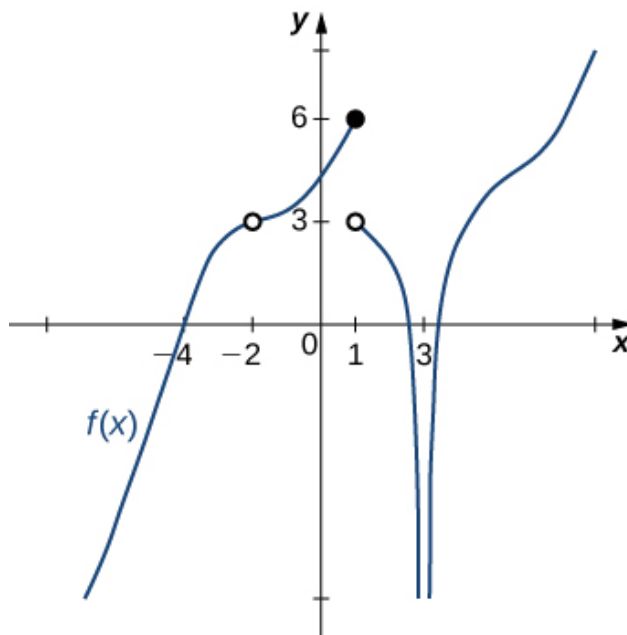
- C. ∞
- D. 0.117
- E. None of the above

9. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 9} \frac{\sqrt{9x - 65} - 4}{3x - 27}$$

- A. 1.000
- B. 0.125
- C. 0.042
- D. ∞
- E. None of the above

10. For the graph below, find the value(s) a that makes the statement true:
 $\lim_{x \rightarrow a} f(x)$ does not exist.



- A. -2

- B. 1
 - C. 3
 - D. Multiple a make the statement true.
 - E. No a make the statement true.
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